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EXAMINER
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DIVECHA, KAMAL B

ART UNIT	PAPER NUMBER
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2451

NOTIFICATION DATE	DELIVERY MODE
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ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/632,403	<b>Applicant(s)</b> KUMAR ET AL.	
	<b>Examiner</b> KAMAL B. DIVECHA	<b>Art Unit</b> 2451	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 October 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                            |                                                                                         |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

**DETAILED ACTION**

This Action is in response to communications filed 10/02/09.

Claims 1-15 are pending in this application.

**Continued Examination Under 37 CFR 1.114**

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/2/09 has been entered.

**Response to Arguments**

Applicant's arguments with respect to claims 1-15 above have been fully considered but are moot in view of the new ground(s) of rejection, as necessitated by the substantial amendments.

All previous responses by the office still apply and are incorporated herein.

Furthermore, the following should be noted when interpreting the rejection:

“Although claims of issued patents are interpreted in light of the specification, prosecution history, prior art and other claims, this is not the mode of claim interpretation to be applied during examination. During examination, the claims must be interpreted as broadly as their terms reasonably allow. In re American Academy of Science Tech Center, 367 F.3d 1359, 1369, 70 USPQ2d 1827, 1834 (Fed. Cir. 2004)”.

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As such, applicant is suggested to clearly define in the claims the values for plurality of parameters used such as AS, A, AP, SWi, D, eDi, DSi, Dpi, etc., and further clarify how this values are obtained or calculated in view of each other.

**Examiner's Initiated Telephone Interview Attempt**

In order to expedite the prosecution, an attempt was made by the examiner on 12/2/09 and on 11/25/09, to reach the applicant's representative Ashok K. Mannava, in order to discuss the examiner's proposed claim amendments, however the examiner was unable to reach the representative and a voice message was left for the representative at 703-652-3822.

In the message, Examiner indicated the possibility of potential allowance in light of examiner's proposed claim amendments and requested the representative to return a call to the examiner's voice message to discuss the examiner's proposed claim amendments. But, the representative failed to acknowledge and return the call.

In order to expedite the prosecution, applicant is suggested to initiate a telephonic interview with the examiner to discuss various changes and/or amendments.

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**Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

1. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krzyzanowski et al. (hereinafter Krzyzanowski, US 6,792,323 B2) in view of Lunsford et al. (hereinafter Lunsford, US 6,982,962 B1), and further in view of Ferlitsch et al. (hereinafter Ferlitsch, US 2002/0089687 A1).

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As per claim 1, Krzyzanowski discloses a method comprising:

receiving a user request into a coordinating device (fig. 10 step #1003, col. 25 L20-23: watch movie request);

processing with said coordinating device a service description information for each of a plurality of electronic devices available ad-hoc to identify functionally responsive combination of electronic devices capable of servicing said user request (fig. 10 step #1009, col. 25 L4-14: automatically creating the combination of devices by control server);

configuring the said available electronic devices into an ad-hoc combination (fig. 10 step #1018, col. 25 L24-60);

servicing said user request with said ad-hoc combination (fig. 10 step #1021, col. 26 L12-34).

However, Krzyzanowski does not disclose calculating a score for each functionally responsive combination, said calculating using user preference information and configuring (i.e. ranking, sorting, etc.) the said available electronic devices into an ad-hoc combination according to said scores, wherein calculating the score for each functionally responsive combination is based on a weight assigned to each of the devices in the functionally responsive combination according to a combination-level policy, an unweighted device score for each of the devices, and a percentage indicating availability of each of the devices.

Lunsford explicitly discloses the process of calculating a score for each functionally responsive electronic device, said calculating using user preference information, which is based on a weight assigned to each of the devices in the combination according to a combination level policy (such as preferences) and unweighted device score for each of the device (such as the

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weight) (col. 6 L45-65, col. 7 L12-33) and configuring the said available electronic devices according to said scores (col. 6 L45 to col. 7 L33).

Therefore, it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to modify Krzyzanowski in view of Lunsford in order to calculate a score for each functionally responsive combination using user preference information and configuring the combination according to said scores.

One of ordinary skilled in the art would have been motivated because it would have simplified user's experience by automating the selection process to select the optimum device(s) (Lunsford: col. 1 L40-60).

However, Krzyzanowski-Lunsford does not disclose the process of calculating the score for the combination based on a percentage indicating availability of each of the device.

Ferlitsch discloses the process of scoring or ranking the devices based on an indication of availability of each of the devices. Ferlitsch explicitly discloses ranking the devices based on various criteria such as speed, availability, location, etc. (pg. 5 [0050]).

Therefore, it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to modify Krzyzanowski-Lunsford in view of Ferlitsch in order to use the parameter which indicates the availability of the device.

One of ordinary skilled in the art would have been motivated because it would have enabled the selection of the optimum devices for servicing user's request.

As per claim 2, Krzyzanowski in view of Lunsford discloses the method further comprising building said service description information for a respective device from a service identifier, which is representative of a function which said device is able to provide; at least one

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required service identifier, each at least one required service identifier being representative of services that said respective device requires to provide said function; device attribute information, which is representative of characteristics of said device (Krzyzanowski: col. 25 L4-14: device profile, col. 15 L31-53: device discovery and registration); and attribute values, which are representative of a relative score for a respective device attribute (Lunsford: col. 7 L12-64, fig. 6 step #420, 430).

As per claim 3, Krzyzanowski discloses the method further comprising including in said identification of functionally responsive combinations identifying devices having a service identifier which corresponds to said user request and thereafter combines each of said identified devices with each other devices, each other device having a service identifier which matches a required service identifier of a respective identified device (col. 25 L4-14: automatically creating the combination of devices by control server, fig. 10 step #1021, col. 26 L12-34: combining each other devices to implement the users request).

As per claim 4, Krzyzanowski in view of Lunsford discloses the method further comprising computing a separate device score for each device included in a functionally responsive combination, such that for each device said computing uses said device attributes values and weighs said attribute values according to said user preference information (Lunsford: fig. 6 and col. 7 L12-65).

As per claim 5, Krzyzanowski in view of Lunsford discloses the method further comprising weighting said attributes values with a device-level policy comprising a vector of weights which encodes said user preference information for each device attributes (Lunsford: fig. 6 and col. 7 L12-65).



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As per claim 6, Krzyzanowski in view of Lunsford discloses the method further comprising selecting a device-level policy from a predefined group of device-level policies (Lunsford: fig. 6 step #420, col. 7 L12-24, col. 8 L30-53: pre-stated device policies).

As per claim 7, Krzyzanowski in view of Lunsford discloses the method further comprising computing said device score as:

$$DS(D, DP) = \sum_{i=1}^d aw_i(DP) * D(v_i)$$

where:

DS is said device score for device D according to a device level policy DP;

d is said number of attributes for said device;

$aw_i(DP)$  is said weight of attribute i according to policy DP; and

$D(v_i)$  is said device's value for attribute I (Lunsford: fig. 7: is functional code that implements the formula, col. 7 L50-58).

As per claim 8, Krzyzanowski in view of Lunsford discloses the method further comprising using said device scores each device in a functionally responsive combination such that each device score is weighting according to said user preference information (Lunsford: fig. 6 and col. 7 L12-65).

As per claim 9, Krzyzanowski in view of Lunsford discloses the method as in claim 8 above.

However, Krzyzanowski in view of Lunsford does not disclose the process of using a parameter which is indicative of said availability of said device.

Ferlitsch explicitly discloses ranking the devices based on various criteria such as speed, availability, location, etc. (pg. 5 [0050]).

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Therefore, it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to modify Krzyzanowski and Lunsford in view of Ferlitsch in order to use the parameter which indicates the availability of the device.

One of ordinary skilled in the art would have been motivated because it would have enabled the selection of the optimum devices for servicing user's request.

As per claim 10, Krzyzanowski in view of Lunsford discloses the method further comprising encoding a vector of weights for said user preferences information for said device's in a combination (Lunsford: fig. 6 and col. 7 L12-65).

As per claim 11, Kryzanowski-Lunsford-Ferlitsch discloses the method of claim 9, wherein the score for each functionally responsive combination is calculated as:

$AS(A,AP) = \sum_{i=1}^n sw_i (D, AP) * (e(di) * Dsi (D, Dpi))$ , wherein A is a particular combination, AP is the combination level policy, AS is the score, n is a number of said devices that are included in said particular combination; swi is the weight assigned to each device of type I according to said combination level policy, DP is a device scoring policy DSi is the unweighted device score for each device D and edi is the percentage indicating the availability of said device Di (Lunsford: fig. 7: is functional code that implements the formula, col. 7 L50-58, Ferlitsch: (pg. 5 [0050]: ranking devices based on speed, availability, etc.). (In this claim, the followings should be noted: n is not defined, so n can be 1, the combination-level policy is not defined, so the combination-level policy can be policy of a device, edi indicates the percentage of availability but it fails to indicate how this value is obtained, so the value can be 100 percent or 1, DSi is the unweighted device score, but unweighted device score is not defined, so it can merely be a value assigned by a user, a number or 1. As such, when using n=1, swi=weight as in

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Lunsford,  $edi=1$ , and  $DSi=1$ , the  $AS = swi*1*1=swi$ =weight assigned to each device as in Lunsford).

As per claims 12-14 [Apparatus and product], they do not teach or further define over the limitations in claims 1-8. Therefore claims 12-14 are rejected for the same reasons as set forth in claims 1-8.

As per claim 15, Krzyzanowski in view of Lunsford discloses the computer data storage media wherein said computer software instructions comprise run time software modules and configuration software modules, said run time modules comprising:

- a user interface for receiving said user request (Krzyzanowski: fig. 1 item #110: providing user interface software module);

- a service registration and look up module for registering said service description information for said available devices (Krzyzanowski: fig. 1 item #114, col. 15 L17-53).

- an aggregator module for identifying said functionally responsive combinations (Krzyzanowski: fig. 1 item #114, col. 25 L4-14: automatically creating the combination of devices by control server);

- an evaluator module for calculating said scores for each of said functionally responsive combinations (Lunsford: fig. 7: is functional code that implements the formula for calculating the score, col. 7 L50-58);

- and wherein said configuration modules include:

- a service repository for storing said service description information for each registered device (Krzyzanowski: fig. 1 item #114: server, col. 15 L17-53; Lunsford: fig. 2 item #90);

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a policy repository for storing policy information; and user preference history files for storing historical user preferences and contextual information (Krzyzanowski: fig. 1 item #114: server, col. 22 L9-14, col. 22 L54 to col. 23 L7, col. 24 L36-50: storing user profiles and/or macros file).

### **Additional References**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Reisman, US 2003/0229900 A1: Method and Apparatus for browsing using multiple coordinated device sets.
- b. Gao, US 6,581,094 B1: Identifying digital devices based on device's uniform device descriptor file that specifies the attributes of the device in XML document in a networked environment.
- c. Leung et al., US 7,092,977 B2: Techniques for storing data based upon storage policies.
- d. Shibata, US 7,085,761 B2: Changing search results rank.

### **Conclusion**

Examiner's Remarks: The teachings of the prior art should not be restricted and/or limited to the citations by columns and line numbers, as specified in the rejection. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is

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respectfully requested from the applicant in preparing responses, to fully consider the references in its entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the examiner.

In the case of amendments, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and support, for ascertaining the metes and bounds of the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KAMAL B. DIVECHA whose telephone number is (571)272-5863. The examiner can normally be reached on Increased Flex Work Schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on 571-272-3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/KAMAL B DIVECHA/  
Examiner, Art Unit 2451